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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

July 19, 1996

EX PARTE

Mr. William Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: CC Docket No. 96-112, Allocation of Costs Associated with Local Exchange Carrier Provision of Video Programming Services

Dear Mr. Caton:

I enclose a declaration on the subject of the cost allocation issues in this proceeding, which I have prepared and wish to submit on my own initiative and behalf.

It expounds my conviction that what I take to be the central purpose of the Telecommunications Act of 1996—namely "to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services...by opening all telecommunication markets to competition"—demands that investment decisions be left to investors and purchasers of new services.

In my firm judgment this goal demands that the Commission suspend the effort it has undertaken in this proceeding to allocate costs of multipurpose facilities and (possibly) change the prices of regulated services provided over those facilities.

Please include this statement as part of the public record in the above-captioned proceeding.

Sincerely,

Alfred E. Kahn

AEK/alh
Enclosure

cc: R. Hundt
R. Chong
S. Ness
J. Quello

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	CC Docket No. 96-112
Allocation of Costs Associated with	)	
Local Exchange Carrier Provision	)	
of Video Programming Services	)	

Declaration of Alfred E. Kahn

July 19, 1996

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Declaration of Alfred E. Kahn

I. INTRODUCTION AND SUMMARY

1. My name is Alfred E. Kahn. I am the Robert Julius Thorne Professor of Political Economy, Emeritus, Cornell University and Special Consultant with National Economic Research Associates, Inc. ("NERA"). My business address is 308 North Cayuga Street, Ithaca, New York 14850.

2. Among my experiences pertinent to my submission in this proceeding are that I was Chairman of the New York State Public Service Commission between 1974 and 1977 and of the Civil Aeronautics Board in 1977-78; I am the author of the two-volume *The Economics of Regulation*, published originally by John Wiley & Sons in 1970 and 1971 and reprinted in 1988 by the MIT Press; I have written and testified extensively on the subject of telecommunications regulatory policy and have published a book and numerous articles on antitrust policy. I was a member of the Attorney General's National Committee to study the Antitrust Laws and the National Commission for the Review of Antitrust Laws and Procedures. I have over the last 20 years testified some 40 times, at both the state and federal levels, in legislative, administrative and judicial proceedings, arguing the benefits of a competitive regime for telecommunications and expounding upon the prerequisites of a policy that would on the one side protect customers and, on the other, preserve fair competitive opportunities for both the incumbent telephone companies and their rivals. I have been advisor on telecommunications policy to Governor Carey, of New York State, consultant with the Antitrust Division of the U.S. Department of

Justice on telecommunications policy, a member of the New York State Telecommunications Exchange and the Ohio Blue Ribbon Panel on Telecommunications Regulatory Reform, and was for six years a member of the Economic Advisory Council to the American Telephone and Telegraph Company. I attach a copy of my curriculum vitae as Appendix A to this testimony.

3. The purpose of this Affidavit is to set forth, on my own initiative and behalf, the fundamental principles by which the Commission should in my opinion be guided in its Docket No. 96-112, and the implications of those principles with respect to its undertaking to establish rules governing how incumbent local exchange carriers allocate their costs between regulated and non-regulated activities.

4. The principles by which I urge the Commission to be guided reduce to a single one, both simple in concept and fundamental: that the unregulated services should have assigned to them all of the incremental costs for which their offer or proposed offer are causally responsible and the regulated services bear <u>none</u> of those costs. The corollary is that the regulated services receive none of the benefits—except as the investments give them an opportunity to purchase new and/or unregulated services and introduce competition into their provision. This rule will serve what I take it to be the twin purposes of this proceeding and of the Telecommunications Act of 1996—namely, first,

> to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services...by opening all telecommunications markets to competition....(NPRM, par. 1)

and, second, to ensure that purchasers of preexisting regulated services bear no part of the burden of the costs incurred by the incumbent LECs in order to provide those unregulated, competitive offerings.[1] These twin goals are two sides of the same coin, once one recognizes, as the Commission has itself recognized in a contemporaneous proceeding, that the first goal

> is not to ensure that entry shall take place irrespective of costs, but to reduce barriers...that inefficiently retard entry, and to allow entry to take place where it can occur efficiently.[2]

5. These twin goals will be achieved, however, only if the Commission abandons the effort it has undertaken in this proceeding and leave its price caps for regulated services unchanged. Contrary to its underlying assumption, any attempt on its part to allocate the costs in question—by whatever method, on whatever basis—will almost certainly be unnecessary, at best, and frustrate their achievement, at worst. It will also flatly contravene the central intention of the Act to rely on competitive market forces, rather than regulation, to determine the future course of the telecommunications industries. Since this conclusion would seem, on superficial consideration, to flout the continuing responsibility of the Commission to protect purchasers of regulated services from exploitation (and possibly also competitors from cross-subsidized competition), it will be necessary to set forth the argument in some detail.

6. The way to encourage efficient entry and to ensure that it is not inefficient is (1) to open all markets to free competitive entry, including entry by the incumbent LECs, and (2) to impose

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[1] The Commission clearly accepts this second goal of protecting regulated ratepayers from "bear[ing] more costs than they would had the shared use facilities not been built" (par. 20; see also par. 24), but expresses a belief also

> that telephone ratepayers are entitled to at least some of the benefit of the economy of scope between telephony and competitive services. (par. 23)

I propose to point out to the Commission that the latter goal is in direct conflict with the central purpose of the Telecommunications Act.

[2] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Notice of Proposed Rulemaking*, CC Docket No. 96-98, April 19, 1996, par. 12.

on the entrants the full additional costs and permit them to retain the full benefits entailed by that entry. An alternative way of describing the second requirement is that the purchasers of the regulated services collectively be made neither worse off nor better off by the entry of the LECs into the unregulated markets—specifically, that the price of the preexisting regulated services be neither increased nor decreased by allocations or reallocations of those incremental costs.[3]

7. The LEC Cost Allocation NPRM appears to reflect a previous decision by the Commission that the proper procedure, in confronting the costs of a joint network constructed to provide both regulated telephone and new services is, first, to assign to each of those two categories the costs for which it is causally responsible and, second, to allocate the residual or common costs on some plausible or "reasonable" basis. I submit, respectfully—and propose to demonstrate—that the second step of this process conflicts not just with abstract, economic efficiency principles but with (what I have taken to be) the central purpose of the Telecommunications Act,—namely to encourage the fullest deployment of a modern telecommunications infrastructure consistent with economic efficiency.

8. In further summary of my argument in support of this central recommendation, I will expound the following propositions:

- the essence of the superiority of open competition over regulated monopoly in encouraging innovation is that it imposes on private investors the entire cost and risk—and correspondingly promises them the full benefit—of such ventures;

[3] This constraint should be qualified to recognize that the investment might induce regulators to redefine one or another protected services—for example, by incorporating Touch-tone in the definition of basic service—in ways that justify an increase in price. See note 9, below.

- my proposals would leave prices of regulated services totally unaffected, whether they are regulated under a rate base/rate of return, price cap or mixed regime;
- the competition between the LECs and other suppliers of the unregulated services would under that rule be both fair and efficient;
- cost allocations—as distinguished from assignments of costs incrementally on the basis of causation—are both unnecessary and certain to frustrate the goal of efficient investment; and, in sum,
- the incremental cost rule I propose (whether administered by the Commission or the natural consequence of its abandoning the cost allocation effort) would be the only one consistent with the statutory goal of encouraging the efficient deployment of new technology, as determined by the competitive market; and not only does achievement of that goal require no allocation or assignment of the costs of common facilities: any such effort by the Commission would conflict with the competitive process for achieving it contemplated by the Act.

II. PREREQUISITES OF EFFICIENT INNOVATION IN RELATION TO THE 1996 TELECOMMUNICATIONS REFORM ACT

9. The relationship between the historical rate base/rate of return regulation that we have hitherto practiced in the telephone industry and innovation is more complex than is typically understood. In some important ways regulated monopoly facilitates innovation: consider the ability of an AT&T, precisely because of its historical monopoly, to finance a program of research and development that was the envy of the entire world, in effect taxing its captive

customers for that purpose; and consider also the comparative security that historical cost-plus regulation gave it in the expectation of being able to recover in regulated rates the costs of its investments in innovation.

10. At the same time, it is also clear that, by narrowing the range of profits that companies may expect to obtain from such ventures—and, as part of the same process, by typically permitting the current recovery of depreciation rates widely recognized historically as unrealistically low for industries subject to rapid technological change[4]—regulation tends to inhibit the undertaking of innovations. This damping tendency is accentuated by the understandable reluctance of regulators fully to pass on to ratepayers the sometimes very large costs of ventures that turn out unsuccessfully: regulation therefore has a tendency not merely to narrow the range of expected profit outcomes but to do so asymmetrically—giving rise to an expectation that risk-taking companies may be denied the opportunity to recover the costs of unsuccessful ventures while being denied also the ability fully to retain the offsetting large profits of successful ones.

11. The competitive ideal—which it was the clear intention of the 1996 Act to approximate[5]—is that risks of such ventures be borne not by captive ratepayers but by investors. In this model, ratepayers are not required to bear the losses stemming from

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[4] See my *The Economics of Regulation*, Vol. 1, pp. 117-22, "Depreciation Policy and Technological Progress," and Vol. 2, pp. 146-147, 149-150.

[5] The Conference Report stated as its purpose

> to provide for a pro-competitive de-regulatory national policy framework...opening all telecommunications markets to competition....

Conference Report to accompany S.652, 104th Cong., 2d Sess.

unsuccessful investments; by the same token, neither are they permitted to appropriate any of the benefits flowing from successful ones.

12. This complete transfer of risk from purchasers of existing telephone services to the companies themselves is achieved by a rule that completely removes from the cost basis for the rates for those services the totality of the costs additionally imposed on the company by its undertaking to put itself in a position to offer new services, regulated or unregulated.[6] The requisite symmetrical retention by the shareholders of the full benefits of such ventures is achieved by the corollary of the foregoing proposition—namely, that the shareholders not be required to share the revenues from those new offerings (or, as I will explain presently, any cost savings achieved by the new facilities), either directly or by forcing them to bear some of the costs that the telephone company suppliers would have rationally incurred in any event in order to provide the preexisting regulated services alone.

III. APPLICATION OF THE INCREMENTAL COST RULE AND THE PRICES OF REGULATED SERVICES

13. As the NPRM in this proceeding recognizes, some costs of the ventures by LECs into the offering of unregulated services are unequivocally identifiable as causally attributable to those services: an obvious case would be the cost of television programming. Others—the

[6] The rule might appear equivocal, as I have stated it: does it not require a regulatory determination of what portion of the cost of joint facilities was "additionally imposed" by the desire to offer the new services, what portion is properly attributable to the existing regulated services? The answer is two-fold: first, it is possible, conceptually, to identify the incremental cost responsibility of the new services; but, second, the same efficiency purpose will be achieved merely by holding the prices of regulated services unaffected by these investments, as I will proceed to explain.

most obvious and important example would be the costs of constructing and maintaining fiber optic transmission facilities—clearly have to be apportioned in some way between the regulated and unregulated services. The only objective basis for doing so that makes economic sense—and, I will show, that complies with the central purpose of the statute—is on the basis of incremental causal responsibility.

14. An entirely separate question—to which I will turn after exposition of the pertinent economic principles—is: what agency should do that "apportioning"? The answer is that the only agency competent to do so efficiently—and the agency clearly contemplated by the Telecommunications Reform Act—is the market, competitive or otherwise, constrained only by continuing regulation of services the supply of which is inadequately disciplined by competition.

15. The several services that would be producible by the joint facilities in question are, strictly speaking, "common," not "joint," because their relative quantities can vary infinitely in proportion to one another. In these circumstances, each has its own separate, objective incremental cost, which can be ascertained by the simple process of varying the output of each—along the entire range from zero to whatever amount the market will absorb—while holding the output of all the others constant.[7] Just as we can, in principle, readily identify the marginal costs of toll calls that employ the same switches and transport facilities as local calls, on either a marginal or incremental (small increment or total service) basis, so in principle we can readily define the incremental costs of adding video capability, for example, to a network

[7] I have explained this distinction in my *The Economics of Regulation*, reprinted, Cambridge: The MIT Press, 1988, Vol. I, pp. 77-83.

intended—or that would have been intended—to supply telephone service only. The fact that those costs may have to be estimated (whether by company managements, which should bear responsibility for investment decisions, or by regulators—who, I will contend, should not) in no way demonstrates that they lack objective reality; there is a concrete incremental cost whose dimensions are being sought. In contrast, there is no such thing as the incremental cost of producing such joint products as cotton and cotton seeds.

16. I interrupt this exposition to anticipate—and promise to respond to—the likely reaction that such a method somehow assumes the telephone services come "first" and the video services only "second," and by so doing would (1) unfairly burden the purchasers of the former by imposing on purchasers of the latter "only" the costs of adding video capability to a preexisting telephone system, and (2) expose competitive providers of the video services to unfair competition from (telephone company) rivals faced with the necessity of recovering from their video offerings "only" those incremental costs.

17. The question to be answered, then, in ascertaining the separate total incremental cost of any service produced in common with others—is, simply: what are the costs that the supplier would have continued to incur but for the addition of that service; and—the other side of the coin—what additional cost of the common facilities has been incurred or would be incurred in order to make possible its offer?

<u>The relationship to stand-alone costs</u>

18. As the foregoing recipe demonstrates, the generally accepted way of ascertaining the total long-run incremental cost of a particular service produced in common with others is to determine the difference between the total cost of a system optimally designed to produce only

the latter—on a stand-alone basis—and the total costs of a system designed also to produce the service under consideration. Manifestly, if the revenues from the latter service recover the total costs that adding it to the mix adds to the company total, it is in the interest of private companies to offer it; and a company's undertaking to supply it can impose no burden on purchasers of the other services: there is no way in which its provision can logically be said to be subsidized by them. As I understand it, this is the calculation that Dr. Leland Johnson has set out to make in his Affidavit submitted on behalf of the National Cable Television Association.[8] In making it, however, it appears that he has employed estimates of only the respective capital or investment costs of the two alternative hypothetical systems being compared. The total incremental cost measure or subsidy test clearly requires consideration under both scenarios of the respective total costs of the two systems—the stand-alone and the common one.

19. As I understand the facts, this omission on his part is a critical one. When telephone companies invest in fiber optic transmission facilities, they do so in expectation of at least two kinds of benefits—first, the savings in cost of providing telephone services alone that those new facilities make possible, taking the form—let us assume, for simplicity—of savings in maintenance costs thenceforward (as compared with the maintenance costs that would have been associated with copper cable); and, second, the ability to offer new services, such as video.[9] By confining his attention to the comparative investment costs of the two alternative

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[8] Comments of the National Cable Television Association, Inc., Attachment 1, May 31, 1996.

[9] These two do not exhaust the list of expected benefits. The new multi-purpose investments will also provide expanded capacity (or the avoidance of congestion costs) and improved quality of existing regulated services. Both of these purposes can readily be subsumed in the ensuing analysis as involving either costs that it would in any event have been efficient for the company to incur in supplying those services and therefore causally (continued...)

transport facilities, it appears Dr. Johnson has exaggerated, perhaps grossly, the incremental costs of the new (video) services.

20. Assume, to take a plausible but extreme example, that in some situations the existing copper network is economically obsolete, because the investment costs of converting it to fiber would be fully justified by the savings in maintenance costs alone. In those circumstances, clearly, addition of the video capacity is, technically, a free good: it imposes no additional costs on the system and its offer, even at rates that recover <u>none</u> of the investment costs of the new multi-purpose facilities, could not be a burden on purchasers of the regulated services. Assume, next, that the savings in the maintenance costs that would otherwise have had to be incurred to supply the regulated telephone services amount, in present value terms, to, say, 40 percent of the investment costs of the conversion: in that event, the incremental costs of the video capacity would amount to only 60 percent of those common costs; and so long as no portion of that 60 percent was recovered in any way from purchasers of existing regulated services, the offer of the new services could in no way be cross-subsidized by them.[10]

(...continued)

attributable to them or costs incrementally attributable to (and properly recovered in the prices of) a newly improved or totally new regulated service or services.

[10] The example could logically be expanded to embrace the possibility mentioned in the preceding footnote that the investment might be justified also as the more economical way of providing additional capacity for supplying existing regulated services. By the same reasoning, the addition of more capacity than required efficiently for the regulated telephone services would be causally attributable entirely to the video (and other new) services.

It is probably desirable for me to insert a warning at this point that I would not wish these elaborations of the relevant incremental cost and benefit principles to be interpreted as advising the Commission to make these factual determinations. On the contrary, as I have already signaled, my ultimate firm recommendation, in Part VI, below, is that the assessments, unbiased by regulatory cost allocations, be left to investors.

21. On the basis of his stand-alone cost exercise, Dr. Johnson proposes an allocation of common costs between regulated and new services, in the name of preventing any such cross-subsidization.[11] But achieving that result, as I have already demonstrated, does not involve or require any allocation of the common investment costs between the two categories of service. It would be produced by the very kind of exercise in which Dr. Johnson has set out to engage, provided he compared not just the investment costs but the total costs of the two systems. In that proper comparison, the calculated incremental costs of the second, dual-purpose system would be decreased by the saving in maintenance or variable costs (in present value terms) achieved by the common, fiber optic facilities and the total additional costs causally attributable to adding the capability of providing video services would be reduced correspondingly. It would be decreased, similarly, to the extent that the new facilities improved the quality of existing regulated services or made possible the offer of new ones—in each case by the net value of those improvements or offerings.[12] And that would be the economically proper measure of the incremental cost of the video (and other new, unregulated) services—the net amount by which adding capacity capable of offering them increases the estimated total costs of a system designed to provide only regulated telephone services on a stand-alone basis. Dr.

[11] See his Reply Comments: Allocating Common Costs to Avoid Cross-Subsidy and Enable the Sharing of Benefits, Attachment to Reply Comments of the NCTA, June 12, 1996; see, e.g., pp. 11-12. Allocation may indeed be used to "share the benefits," as he proposes; I point out, respectfully, however, that in making this recommendation Dr. Johnson passes beyond the area of his expertise as an economist: observe that he offers no economic justification whatever for his recommendations of how those benefits should be shared; and, as I will explain presently, that sharing would conflict with both economic efficiency and the central purpose of the new Telecommunications Act.

[12] See notes 9 and 10, above. I turn, in Part VI, below, to the question of the administrative feasibility of the FCC's making such determinations—which considerations reinforce my conviction that it should not try.

Johnson's proposed allocation is the tip-off that his purpose goes beyond that of preventing cross-subsidization.

Distributing the benefit of economies of scope

22. We return necessarily to the question: why should the video service enjoy the entire benefit of the economies achieved by providing the two categories in common? Is it not likely that if the calculations were reversed and the incremental costs of telephone service were to be measured by adding telephone capacity to a hypothetical system already designed to provide video service, the incremental costs of the former might turn out to be very low, as well? And that the total of the incremental costs of the two services, each estimated in this way, would be less than the total cost of the combined system? The answer is yes. That is the nature and consequence of economies of scope.

23. Before confronting the choice of which of these two measures of incremental cost is to prevail—the low incremental costs for the regulated services produced by beginning with the cost of the stand-alone system to provide the unregulated ones or the opposite—it is necessary to consider the operational consequence of the cost apportioning for which the Commission seeks guidance in this proceeding. The only possible direct, explicit purpose would be to determine the costs to be recovered in the rates of the services regulated by both the Commission and—since the States generally follow the Federal allocation rules—the state commissions: the allocation would be meaningless except on the assumption that assigning more or fewer costs to those services would—either directly, under a cost-plus system, or indirectly, when price cap formulas are being considered or reevaluated—be reflected in higher or lower regulated rates. It would have no direct effect on the prices of the unregulated

services; but it would have a direct substantial effect on (incremental) investment in the capability of offering them. The greater the assignment of the benefits of economies of scope to the regulated telephone services—the greater, in other words, the assignment of common costs to be recovered from the unregulated ones—the larger the prospective net revenues from the latter services would have to be to justify any investment in such common facilities.

24. The Telecommunications Act, I submit, unequivocally dictates the choice: its explicit goal

> to accelerate rapidly private sector deployment of advanced telecommunications and information technologies...by opening all telecommunications markets to competition...[13]

clearly requires that all such investments must, if they are to be efficient, bear the total incremental costs that they entail and be rewarded with the sum-total of the benefits that they generate—cost-savings in the provision of regulated services[14] plus the net value of any and all new or enhanced services (regulated and unregulated) whose supply they make possible. This condition—which dictates that the low net additional cost of adding unregulated to regulated services (rather than the reverse) be the one that prevails—also satisfies the proviso that purchasers of the still-regulated services not be burdened by that deployment.

25. Achievement of the optimal level of investment in new facilities thus requires not only that purchasers of the regulated services not be burdened by those investments but that they

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[13] NPRM, par. 1.

[14] If companies investing in the new facilities had to recover the gross additional investment costs in the revenues from unregulated services alone—that is, if purchasers of the regulated services were not charged with the portion of the investment that would have been justified by the savings in the variable costs of serving them or if their rates were reduced in expectation of those savings—it would clearly discourage economically efficient investments in advanced technologies.

also not be <u>benefited</u> in their role as purchasers of the regulated services (as distinguished from the benefit they would receive from the availability of new services and the intensified competition their offer by LECs might provide). The NPRM does not seem to recognize the conflict between that rule—necessary to encourage all economically justified investments in facilities upgrading—and the Commission's declared intention to see to it that telephone ratepayers "[receive] at least some of the benefits of the economy of scope between telephony and competitive services." (par. 23)

26. The principle that I advocate would, instead,

- leave purchasers of the regulated services bearing no net burden of the hypothesized additional costs of investing in the dual-purpose loop network: that is, they would (explicitly or implicitly) bear part of the common costs of the new facilities only to the extent that they would benefit from the savings in variable costs (or improvement in quality) that it made possible; and
- put the risk of the net incremental costs clearly attributable to the offer of the video services entirely on the company and its shareholders, to be recovered—or not recovered—in the revenues from video and any other regulated or unregulated services made possible by upgrading the facilities.

27. Various non-LEC witnesses, testifying on behalf of either potential competitors—such as cable companies—or consumers of telephone services have contended that the steps the telephone companies have taken to upgrade their facilities in order to be able to offer video and other new services have imposed special and additional costs on the companies—costs, for example, of a greater margin of excess capacity than would have been justified for the

provision of telephone service alone or of accelerated depreciation, obsolescence or premature scrapping of existing facilities. To the extent that their factual contentions are valid, they would be fully taken into account by the rule I have proposed: those incremental costs would indeed be properly borne by shareholders, to be recovered—or not recovered—in the revenues from the unregulated services. This observation applies equally to the contention that these plans of the telephone companies have resulted in premature scrapping of existing facilities. By that same logic, to the extent that the scrapping or replacement was not premature—that is to say, to the extent the investment in new facilities was justified in present value terms by the savings in the operating costs that would have been incurred if the facilities had not been replaced—that portion of the investment costs would properly be chargeable against the regulated services, thereby imposing no net additional burden on them.

IV. THE FAIRNESS AND EFFICIENCY OF COMPETITION UNDER THE PROPOSED ASSIGNMENT OF INVESTMENT COSTS

28. A central purpose of competition, as contemplated by both economists and, evidently, the FCC in its interpretation of the intent of the Telecommunications Reform Act (see par. 4, above) is to ensure that the products or services in question are provided with the minimum expenditure of society's scarce resources, by distributing responsibility for supply among rivals in such a way as to minimize total social costs. Maximizing economic efficiency, thus defined, means minimizing the additional—marginal or incremental—costs of supply: the only pertinent comparisons are of the relative marginal or incremental costs that would be entailed

by the various alternatives.[15] The relevance of only marginal or incremental costs is especially obvious when the question is one of the conditions under which a would-be new entrant proposes to offer its services in competition with an existing supplier. Obviously it is the task of efficient competition, in these circumstances, to see to it that the aspiring competitor is able to prevail to the extent—and only to the extent—that the incremental costs involved in its supplying the service in question are lower than those of the incumbent. The rule I have expounded achieves precisely that purpose.

29. These considerations provide the response to the layman's likely reaction, to which I have already referred, that there is something unfair about permitting a company offering both telephone and video services to compete with cable companies with prices that cover "only" its marginal or incremental costs, while the challenged video suppliers must recover their total costs from the competitive operation. This intuitive—but economically incorrect—consideration has been confronted in the United States prototypically in cases involving competition between railroads, on the one side, and trucks or barges, on the other. In the historic Ingot Molds case,[16] for example, it was agreed by all adversaries that the long-run incremental costs of the railroads for handling the contested traffic were substantially below those of the competing barges; but whereas for the barges incremental and average costs were

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[15] In view of the fact that the Commission is simultaneously engaged in proceedings with the purpose of effectuating the local competition provisions of the Telecommunications Act (Docket No. 96-98), I wish to emphasize the consistency between these assertions and my defense of markups above incremental cost in the LECs' charges to competitors for essential network elements or facilities, in a Declaration I submitted in collaboration with Dr. Timothy J. Tardiff in that proceeding on May 30, 1996. As we pointed out there, incorporation of such markups, under proper imputation rules, is not only consistent with efficient competition between LECs and CLECs, it is necessary to ensure that the competition not be distorted by differential burdens imposed by regulation on the former companies—handicaps having nothing to do with their relative efficiency.

[16] American Commercial Lines, Inc., et al. v. Louisville & Nashville Railroad Co. et al., 392 U.S. 571 (1968).

roughly equal, for the railroads the average or fully distributed costs—including a proportionate share of contribution to the coverage of sunk costs and overhead—were markedly higher than those of the barges. The Supreme Court overturned a decision by the Interstate Commerce Commission that would have permitted a railroad to reduce its rate down toward its long-run incremental costs sufficiently to get the business: a majority of the Court felt it would be unfair to permit one competitor to take business away from another "merely" because its marginal or incremental costs were lower.

30. That decision was economically nonsensical. If the railroads could handle the contested traffic with the use of a smaller additional amount of society's scarce resources—in both the short- and long-run—than the barges, then it was grossly inefficient not to have permitted them to reflect that marginal cost advantage in their rates and take over the business.[17] And in point of fact the statute subsequently deregulating the railroads, in 1980, explicitly authorized them to reduce their rates down to direct variable--that is, even below long-run incremental—costs.[18]

[17] See my fuller discussion in *The Economics of Regulation*, Vol. I, pp. 162-63.

[18] (c)(1) A rate for transportation or other service provided by a rail carrier subject to the jurisdiction of the Commission under sub-chapter I of chapter 105 of this title may not be established below a reasonable minimum. Any rate for transportation by such a rail carrier that does not contribute to the going concern value of such carrier is presumed to be not reasonable. A rate that contributes to the going concern value of such carrier is conclusively presumed not to be below a reasonable minimum.

(2) A rate for transportation by a rail carrier that equals or exceeds the variable cost of providing the transportation is conclusively presumed to contribute to the going concern value of such rail carrier....

(B) In the determination of variable costs for purposes of minimum rate regulation, the Commission shall, on application of the rail carrier proposing the rate, determine only the costs of such carrier and only those costs of the specific service in question unless the specific information is not available. The Commission may not include in such variable costs an expense that does not vary directly with the level of transportation provided under the proposed rate.

Staggers Rail Act of 1980, Public Law 96-448, 96th Congress, Title II, par. 10701a, Oct. 14, 1980.

31. The foregoing exposition is the simple answer to the possible complaint that assigning to the unregulated services "only" the incremental cost entailed in making their offer possible would enable the LECs to compete unfairly with such incumbent suppliers as cable companies. In exactly the same way, efficient competition in <u>telephone</u> markets requires that such challengers of the LECs as the cable companies be free to enter so long as the (incremental) costs of adding telephonic to video capacity are no greater than those of the incumbents.

32. Witnesses for competitors of the telephone companies in various regulatory proceedings have contended that to the extent LECs enjoy economies of scope deriving from the provision of utility and competitive services together, both fairness and the encouragement of competition require that those benefits be assigned to the utility services, with the competitive operations required to compete on a stand-alone basis. The similarity of these arguments to the position taken by the NCTA in this case is obvious, as are also the motives of these competitors. Their prescription would of course flatly prohibit the incumbent telephone companies from bringing to bear in competitive markets any of the advantages accruing to them from their economies of scope and consequent difference between their incremental and stand-alone costs, and by so doing violate the fundamental principle that efficiency is best served when responsibility for production is distributed among rivals on the basis of the former costs.

33. The witnesses seeking to handicap telephone company competitors of their clients in this way clearly imply, where they do not assert flatly, that the economies of scope available to the former companies are so overwhelming as to make them natural monopolies, since their incremental costs would invariably be lower than those of all potential challengers. That implication raises questions of market reality: I do not believe that most of these markets are indeed natural monopolies; but—confining our attention first to the relevant economic

principles—if the economies of scope available to the telephone companies are indeed overwhelming, protection of existing competitors (such as cable companies) from the entry of rivals because of the latter's low incremental costs would be inefficient and in flat violation of the central purpose and philosophy of the Telecommunications Act.

34. Where these assertions ignore market reality is, precisely, in their assumption that only the incumbent telephone companies enjoy economies of scope. On the contrary, the competition that is developing in telecommunications is being conducted and will continue to be conducted among rivals each exploiting its own particular economies of scope, and consequent low incremental costs of providing potentially competitive services, arising out of its own particular pattern of operations: cable companies providing telephone service, because and to the extent they can add the capacity to do so to their preexisting cable networks at relatively low cost; telephone companies competing in the provision of video because (and if) adding that capacity to their existing networks involves relatively low incremental cost; toll carriers moving into the provision of local telephone service and LECs into interLATA toll because the ability to offer bundled local and toll services involves fuller use of preexisting contacts with customers, brand names, marketing and billing facilities, switches and transport capacities. Given the nature of this competition, no provider should be either helped or hindered by regulatory interventions designed to distribute the benefits of scope economies in some way other than the way in which market competition would distribute them—provided only that purchasers of regulated services not be forced to subsidize that competition.

V. THE CONFLICT BETWEEN RECOURSE TO COST "ALLOCATIONS" AND THE TELECOMMUNICATIONS REFORM ACT

35. The concept of "cost" has no meaning in either economics or logic except in terms of causation. When we say that drunk driving "costs" us so many lives per year or so many dollars in property damage, we can mean only that the practice of drunk driving causes us, individually and/or collectively, to suffer those consequences.

36. In framing my central recommendation, I have employed the term "cost" only in that causal sense—speaking in terms of ascertaining the incremental costs occasioned by the offer or prospective offer of nonregulated services and of assigning to the several services the costs for which they are (causally) responsible.

37. In so doing, I have studiously avoided characterizing the process as one of allocating costs, which term I employ, in the interest of clarity, to characterize distributions of costs among various services on some basis other than cost-causation. I spell out these terminological distinctions not in criticism of the Commission, which employs the latter term to embrace both the assignment of costs defined in causal terms and methods not grounded in causality—it is well aware of the distinction (see, e.g., par. 24)—but to emphasize my conviction that only the former kinds of costs need be ascertained to achieve the two essential economic purposes of this exercise. More important, any attempt to go beyond ascertainment and assignment to unregulated services of the full net[19] incremental costs for which they are

[19] My attachment of the qualifier "net" to the "full incremental costs" causally attributable to the new unregulated services is intended to take into account the fact, to which I have alluded, that some portion of the gross capital costs of the multi-purpose facilities will be offset by savings in maintenance and other variable costs; and that if efficient investments are not to be discouraged, investors must be permitted to retain all the benefits (including the benefit of such cost reductions as they make possible), while also bearing all the incremental capital costs.

causally responsible and allocate to them something more would be not only unnecessary to achieve those two purposes but would frustrate their achievement. As the NPRM itself recognizes:

> An over-allocation of common cost to nonregulated activities[,] could dissuade companies from entering nonregulated competitive markets.... (par. 20)

38. The same distorted result would flow, by precisely the same process and for the same reason, from the Commission's declared intention to go beyond merely protecting purchasers of regulated services from any burden arising from the joint facilities and confer on them, by allocation, "at least some of the benefit of the economy of scope between telephony and competitive services." (par. 23) The Commission could achieve this last goal, most simply, by attributing to the unregulated services the full incremental costs of the new investments while failing to credit those investments with the savings in maintenance costs or other benefits that they make possible, as Dr. Johnson has evidently done. It could do so equally by appropriating for the benefit of the rates for regulated services some share of the revenues from the unregulated services—which some state utility commissions have demanded in the past, as a kind of "royalty" payment to the monopoly customers for the use of the product of past, ratepayer-financed R&D or of the company name, good will and subscriber lists and contacts. Such a policy would so obviously conflict with Congress' intention of encouraging these investments it is difficult to see this Commission adopting it now. It could do so instead by allocating to the new services a share of the investment costs of the common facilities greater than their (total) incremental costs and—as it explicitly suggests—treat

> all such reallocations to nonregulated activities...[as exogenous cost changes such as could] trigger decreases in related price cap indices (par. 60)